

## Scientific Note

### NEW BACKSWIMMER RECORDS FOR NORTH AMERICA (HETEROPTERA: NOTONECTIDAE)

Over the past several years I have collected extensive biogeographic and occurrence data on aquatic Heteroptera across North America to complement studies in the Southwest (Larsen, E. & C. Olson. 1997. Ent. News., 108: 34–42). I have collected several species of notonectids that represent new state records that are range extensions or fill in obvious gaps. These records complement the efforts of previous researchers on this group (Hungerford, H. B. 1933. Univ. Kansas Sci. Bull., 21: 5–195; Truxal, F. S. 1953. Univ. Kansas Sci. Bull., 35: 1351–1523) and more recent efforts to document the distribution of Heteroptera in general (Henry, T. J. & R. C. Froeschner. 1988. Catalog of the Heteroptera, or true bugs, of Canada and the continental United States. E. J. Brill, New York; Polhemus, J. T. 1997. Ent. News, 108: 305–310) and Notonectidae in Pennsylvania (Yeakel, A., & E. Larsen. 1997. Ent. News, 108: 319–320) and the Pacific Northwest (Scudder, G. G. E. 1977. Syesis 10: 31–38, Zack, R. S. 1990. Pan-Pac. Ent., 66: 168–169).

*Buenoa confusa* Truxal is known from Alabama, Connecticut, Georgia, Indiana, Kansas, Louisiana, Maine, Michigan, Minnesota, Mississippi, New Jersey, New York, South Dakota, Texas, and Virginia in the U.S. and from Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, Prince Edward Island, Quebec, Saskatchewan in Canada, along with Mexico and the West Indies (Polhemus & Polhemus 1988. Catalog of the Heteroptera, or true bugs, of Canada and the continental United States. E. J. Brill, New York). I collected this species in the extreme northwest corner of Iowa (IOWA, DICKINSON Co.: Jemmerson Slough, 3 km WNW of Spirit Lake). The disjunct nature of these records suggests that the full extent of the distribution of this species in the U.S. is not yet fully known.

*Buenoa margaritacea* Torre-Bueno has an extensive distribution throughout the United States (Truxal 1953, Polhemus and Polhemus 1988). I collected specimens in Iowa (LINN Co.: Springville) along with *Notonecta undulata* Say, in Wisconsin (DANE Co.: 5 km S of Madison), and North Dakota (BOWMAN Co.: 13 km S of Bowman; BILLINGS Co.: 2 km S of Medora). I collected *B. margaritacea* in Nebraska (DAWES Co.: 20 km NE of Chadron; ARTHUR Co.: 18 km S of Arthur) and Montana (CUSTER Co.: 22 km E of Miles City).

*Buenoa scimitra* Bare also has an extensive distribution across North America, but more southerly than *B. margaritacea* (Truxal 1953, Polhemus and Polhemus 1988). I collected specimens in Missouri (JOHNSON Co.: 3 km E of Oak Grove) and in Oregon (LINCOLN Co.: 6 km N of Waldport) with *N. undulata* and *N. kirbyi* Hungerford. This report and recent reports for Washington and Idaho (Zack 1990) and British Columbia, Canada (Scudder 1977) suggest that the historical absence of *Buenoa* in the Pacific Northwest (Truxal 1953) may be a sampling artifact.

*Buenoa arida* Truxal has been recorded only from Arizona, predominantly in ephemeral montane streams or stock troughs of various mountain ranges of southern and central Arizona (Truxal 1953, Zalom, F. 1977. Southwest. Nat. 22: 327–

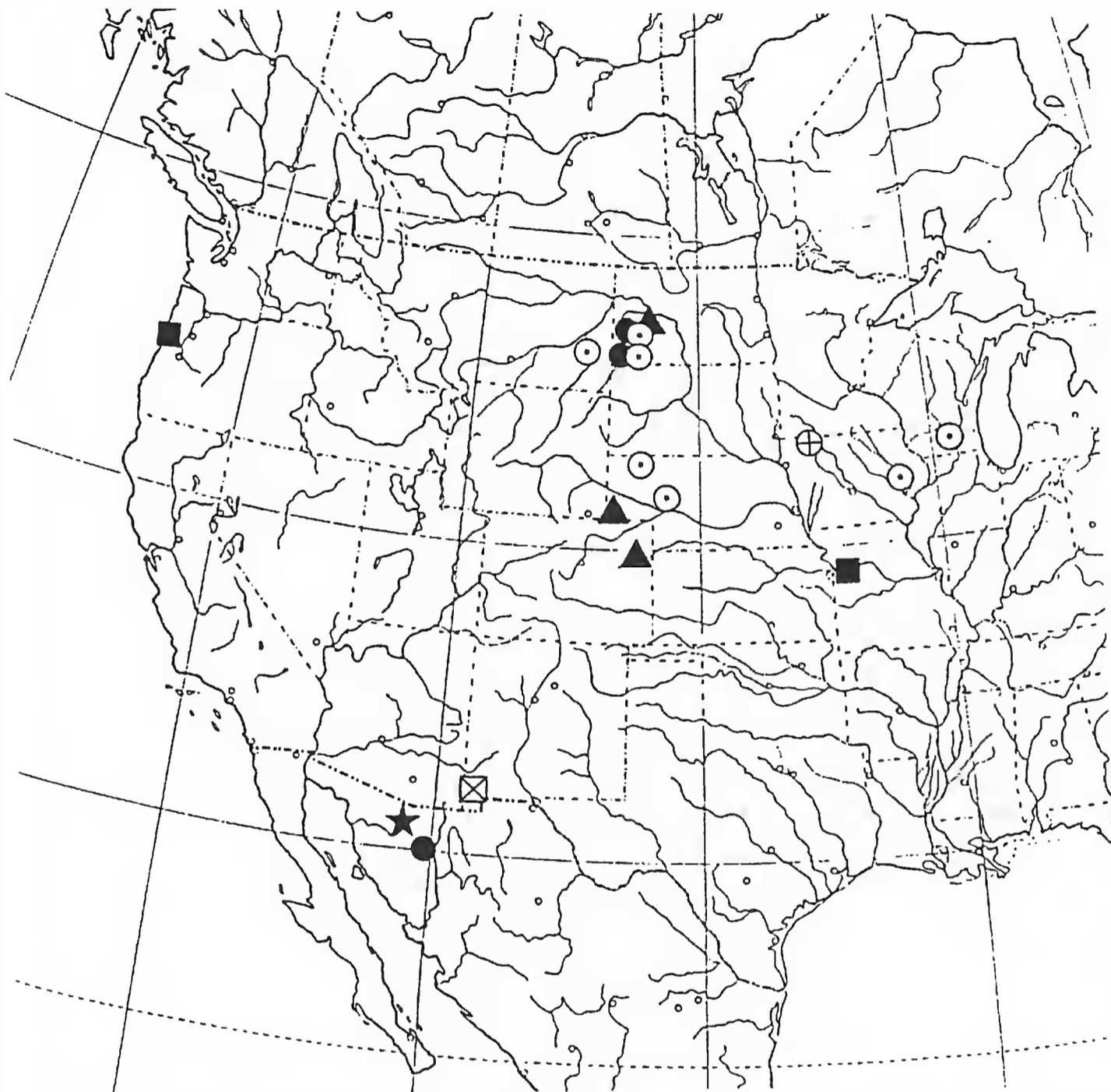


Figure 1. The distribution of new state and country records of notonectids for North America (*Buenoa arida*, star; *B. confusa*, circle with cross; *B. margaritacea* circle with dot; *B. scimitra*, closed box; *Notonecta kirbyi*, closed circle; *N. repanda*, box and cross; *N. undulata*, closed triangle).

336). I collected several specimens in two concrete stock troughs in Sonora, Mexico (10 km NW of Cannanea, and 24 km N of Arizpe). *Buenoa arida* was collected along with *B. arizonis* Bare and several unidentified female *Buenoa* (most likely *B. albida* (Champion), *B. scimitra*, and/or *B. margaritacea*) at the first locality and with *N. lobata* and *B. arizonis* at the second locality.

This is the second report of *N. kirbyi* from Mexico (Truxal F. S. 1996. Bull. Southern Cal. Acad. Sci. 95: 59–82) and the first report for Sonora (Mexico, Sonora, 24 km N of Arizpe). I collected this species with *N. indica* L., *B. arizonis*, *B. albida*, *B. scimitra*, and *B. margaritacea* in a pond augmented for livestock. I also collected *N. kirbyi* in North Dakota (BOWMAN Co.: 13 km S of Bowman; BILLINGS Co.: 2 km S of Medora).

*Notonecta undulata* Say is known from nearly all of the United States (Polhemus & Polhemus 1988). However, I collected specimens in Colorado (PHILIPS Co.: 8 km S of Holyoke), Nebraska (KIMBALL Co.: Mt. Constable;

DAWES Co.: 20 km NE of Chadron; ARTHUR Co.: 18 km S of Arthur), and North Dakota (BOWMAN Co.: 13 km S of Bowman) and near Medora (BILLINGS Co.: 2 km S of Medora).

*Notonecta repanda* Hungerford had previously been known only from Arizona (Polhemus & Polhemus 1988) and Mexico (Hungerford 1933). I collected specimens from a metal tank filled by a windmill in New Mexico (HILDAGO Co.: 6 km N of Cotton City).

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